

ABSTRACT

An alternative etching chemistry which can provide inherently anisotropic etching and eliminate notch formation without the need for heavy polymer deposition is provided by the present invention. The etch is performed with a combination of HBr and N₂ at substrate temperatures greater than approximately 160°C to provide an essentially notch-free and carbon-polymer free anisotropic etching process. The alternative etching chemistry allows for the production of substantially vertical features with smooth sidewalls in an Indium containing multiple layered structure in an ICP plasma etch system.